

Babish, et al.  
 Application No. 10/590,424  
 Filing date: August 23, 2006

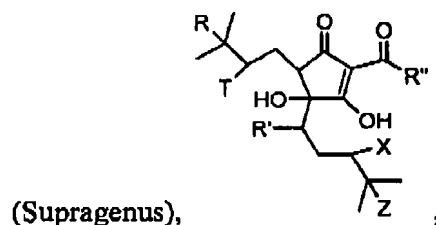
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# AMENDMENTS TO THE CLAIMS:

*The following listing of the claims replaces all prior versions and listing of claims in this application.*

1. (CURRENTLY AMENDED) A composition comprising a compound selected from the group consisting of reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids; fraction isolated or derived from hops and a methylxanthine.
2. (CURRENTLY AMENDED) The composition of claim 1, wherein the compound fraction isolated or derived from hops is selected from the group consisting of alpha-acids, isoalpa acids, reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids is derived from hops, beta-acids, and spent hops.
3. (CURRENTLY AMENDED) The composition of claim 1, wherein the compound selected from the group consisting of reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids fraction isolated or derived from hops comprises a member-  
 compound of a supragenus having the formula:



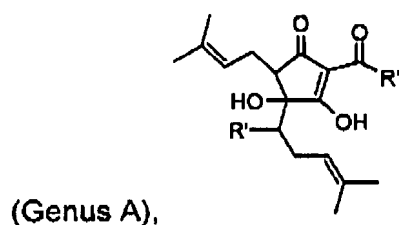
wherein R' is selected from the group consisting of carbonyl, hydroxyl, OR, and OCOR,  
 wherein R is alkyl;

wherein R'' is selected from the group consisting of CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, and  
 CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>;

Babish, et al.  
Application No. 10/590,424  
Filing date: August 23, 2006

and wherein R, T, X, and Z are independently selected from the group consisting of H, F, Cl, Br, I, and  $\pi$  orbital, with the proviso that if one of R, T, X, or Z is a  $\pi$  orbital, then the adjacent R, T, X, or Z is also a  $\pi$  orbital, thereby forming a double bond.

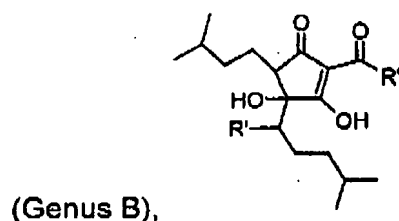
4. (CURRENTLY AMENDED) The composition of claim 1, wherein said compound selected from the group consisting of reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids ~~fraction isolated or derived from hops~~ comprises a member-~~compound~~ of Genus A having the formula:



wherein R' is selected from the group consisting of carbonyl, hydroxyl, OR, and OCOR, wherein R is alkyl;

and wherein R'' is selected from the group consisting of  $\text{CH}(\text{CH}_3)_2$ ,  $\text{CH}_2\text{CH}(\text{CH}_3)_2$ , and  $\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_3$ .

5. (CURRENTLY AMENDED) The composition of claim 1, wherein the compound selected from the group consisting of reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids ~~fraction isolated or derived from hops~~ comprises a member-~~compound~~ of Genus B having the formula:



Babish, *et al.*  
Application No. 10/590,424  
Filing date: August 23, 2006

wherein R' is selected from the group consisting of carbonyl, hydroxyl, OR, and OCOR, wherein R is alkyl;

and wherein R" is selected from the group consisting of  $\text{CH}(\text{CH}_3)_2$ ,  $\text{CH}_2\text{CH}(\text{CH}_3)_2$ , and  $\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_3$ .

6. (CURRENTLY AMENDED) The composition of claim 1, wherein said compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids ~~fraction isolated or derived from hops~~ comprises a compound member selected from the group consisting of ~~humulone, cohumulone, adhumulone, isohumulone, isocohumulone, isoadhumulone, dihydro-isohumulone, dihydro-isocohumulone, dihydro-adhumulone, tetrahydro-isohumulone, tetrahydro-isocohumulone, tetrahydro-adhumulone, hexahydro-isohumulone, hexahydro-isocohumulone, and hexahydro-adhumulone.~~

7. (ORIGINAL) The composition of claim 1, wherein said methylxanthine is selected from caffeine; theobromine; theophylline; aminophylline; doxofylline; pentoxifylline; 8-oxopentoxifylline; 8-oxolisofylline; lisofylline; 1-proparagyl 3,7-dimethyl xanthine; 7-proparagyl 1,3-dimethyl xanthine; 3-proparagyl 1,7-dimethyl xanthine; 1,3,7-tripropargyl xanthine; 3-isobutyl-1-methylxanthine (IBMX); 1,3,7-tripropyl xanthine; 7-benzyl-IBMX; 1-propyl 3,7-dimethyl xanthine; 1,3-dipropyl 7-methyl xanthine; 1,3-dipropyl 7-proparagyl xanthine; 3,7-dimethyl 1-propyl xanthine; and 7-allyl 1,3-dimethyl xanthine.

8. (CURRENTLY AMENDED) The composition of claim 1, wherein the compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids ~~fraction isolated or derived from hops~~ and methylxanthine are in a ratio of about 100:1 to about 1:100.

Babish, et al.  
Application No. 10/590,424  
Filing date: August 23, 2006

9. (CURRENTLY AMENDED) The composition of claim 8, wherein the ~~fraction isolated or derived from hops is reduced isoalpa acid and the methylxanthine is caffeine.~~

10. (CURRENTLY AMENDED) The composition of claim 1, wherein the composition comprises about 0.5 to 10000 mg of said compound selected from the group consisting of reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids-~~fraction isolated or derived from hops.~~

11. (CURRENTLY AMENDED) The composition of claim 10, wherein the composition comprises about 50 to 7500 mg of the compound selected from the group consisting of reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids-~~fraction isolated or derived from hops.~~

12. (CURRENTLY AMENDED) The composition of claim 1, wherein the composition comprises about 0.001 to 10 weight percent of the compound selected from the group consisting of reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-~~hydroisoalpa acids-fraction isolated or derived from hops.~~

13. (CURRENTLY AMENDED) The composition of claim 12, wherein the composition comprises about 0.1 to 1 weight percent of the compound selected from the group consisting of reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-~~hydroisoalpa acids-fraction isolated or derived from hops.~~

14. (ORIGINAL) The composition of claim 1, wherein the composition further comprises a pharmaceutically acceptable carrier.

15. (ORIGINAL) The composition of claim 1, wherein the composition is formulated for administration orally, topically, parenterally, or rectally.

16. (CURRENTLY AMENDED) A composition comprising a compound selected from the group consisting of reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-

Babish, *et al.*

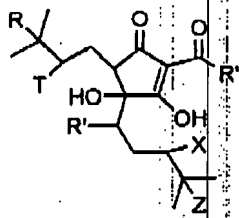
Application No. 10/590,424

Filing date: August 23, 2006

hydroisoalpa acids and beta acids fraction derived from hops and a curcuminoid.

17. (CURRENTLY AMENDED) The composition of claim 16, wherein the compound-fraction derived from hops is selected from isoalpa acids, reduced isopalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids, and beta acids is derived from hops.

18. (CURRENTLY AMENDED) The composition of claim 16, wherein the compound selected from reduced isopalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids fraction derived from hops comprises a member compound of a supragenus having the formula:



(Supragenus),

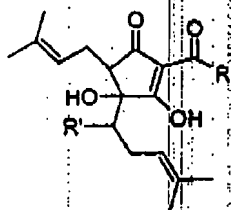
wherein R' is selected from the group consisting of carbonyl, hydroxyl, OR, and OCOR, wherein R is alkyl;

wherein R'' is selected from the group consisting of  $\text{CH}(\text{CH}_3)_2$ ,  $\text{CH}_2\text{CH}(\text{CH}_3)_2$ , and  $\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_3$ ;

and wherein R, T, X, and Z are independently selected from the group consisting of H, F, Cl, Br, I, and  $\pi$  orbital, with the proviso that if one of R, T, X, or Z is a  $\pi$  orbital, then the adjacent R, T, X, or Z is also a  $\pi$  orbital, thereby forming a double bond.

Babish, et al.  
Application No. 10/590,424  
Filing date: August 23, 2006

19. (CURRENTLY AMENDED) The composition of claim 16, wherein said compound selected from reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids ~~fraction derived from hops~~ comprises a member compound of Genus A having the formula:

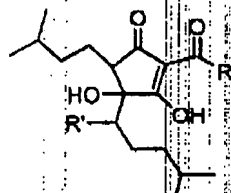


(Genus A),

wherein R' is selected from the group consisting of carbonyl, hydroxyl, OR, and OCOR, wherein R is alkyl;

and wherein R'' is selected from the group consisting of CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, and CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>.

20. (CURRENTLY AMENDED) The composition of claim 16, wherein the compound selected from in reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids ~~fraction derived from hops~~ comprises a member compound of Genus B having the formula:



(Genus B),

wherein R' is selected from the group consisting of carbonyl, hydroxyl, OR, and OCOR,

-7-

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Babish, et al.  
Application No. 10/590,424  
Filing date: August 23, 2006

wherein R is alkyl;

and wherein R' is selected from the group consisting of  $\text{CH}(\text{CH}_3)_2$ ,  $\text{CH}_2\text{CH}(\text{CH}_3)_2$ , and  $\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_3$ .

21. (CURRENTLY AMENDED) The composition of claim 16, wherein said compound selected from in reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids ~~fraction derived from hops~~ comprises a member-compound selected from the group consisting of isohumulone, isocohumulone, isoadhumulone, dihydro-isohumulone, dihydro-isocohumulone, dihydro-adhumulone, tetrahydro-isohumulone, tetrahydro-isocohumulone, tetrahydro-adhumulone, hexahydro-isohumulone, hexahydro-isocohumulone, and hexahydro-adhumulone.

22. (ORIGINAL) The composition of claim 16, wherein said curcuminoid is selected from curcumin, demethoxycurcumin, bisdemethoxycurcumin, cis-trans-curcumin and cyclocurcumin.

23. (CURRENTLY AMENDED) The composition of claim 16, wherein the compound selected from in reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids ~~fraction derived from hops~~ and the curcuminoid are in a ratio of about 100:1 to about 1:10.

24. (ORIGINAL) The composition of claim 23, wherein the ratio is about 3:2.

25. (CURRENTLY AMENDED) The composition of claim 24, wherein the ~~fraction isolated from hops is reduced isoalpa acid and~~ the curcuminoid is curcumin.

26. (CURRENTLY AMENDED) The composition of claim 16, wherein the composition comprises about 0.5 to 10000 mg of said compound selected from in reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids ~~fraction isolated or derived from hops~~.

27. (CURRENTLY AMENDED) The composition of claim 26, wherein the composition

Babish, et al.

Application No. 10/590,424

Filing date: August 23, 2006

comprises about 50 to 7500 mg of the compound selected from in reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids fraction isolated or derived from hops.

28. (CURRENTLY AMENDED) The composition of claim 16, wherein the composition comprises about 0.001 to 10 weight percent of the compound selected from in reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids fraction isolated or derived from hops.

29. (CURRENTLY AMENDED) The composition of claim 28, wherein the composition comprises about 0.1 to 1 weight percent of the compound selected from in reduced isoalpa acids, tetra-hydroisoalpa acids, and hexa-hydroisoalpa acids fraction isolated or derived from hops.

30. (ORIGINAL) The composition of claim 16, wherein the composition further comprises a pharmaceutically acceptable carrier.

31. (ORIGINAL) The composition of claim 16, wherein the composition is formulated for administration orally, topically, parenterally, or rectally.

32. (ORIGINAL) A method of reducing inflammation, comprising administering a composition of any of claims 1-31.